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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/642,542

08/14/2003

Jun Ishii

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11/16/2005

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EXAMINER

QIN, JIANCHUN

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/642,542	ISHII ET AL.	
	Examiner	Art Unit	
	Jianchun Qin	2837	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-33 is/are allowed.
- 6) ☐ Claim(s) 1,4,11,12 and 15 is/are rejected.
- 7) ☐ Claim(s) 2,3,5-10,13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Based on the English translations of the certified priority documents of the following Japanese Applications from which priority is claimed: JP 2002-242481(August 22, 2002), JP 2002-242482 (August 22, 2002), JP 2002-316806 (October 30, 2002), JP 2002-316807 (October 30, 2002), provided by the Applicants, the finality of the Office Action of 06/03//2005 is hereby withdrawn and replaced by the following office action.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Neuman (U.S. Pub. No. 20030103076).

Regarding claim 1, Neuman teaches a recorder for recording a performance represented by pieces of first sort of music data in ensemble with a playback of a music passage represented by pieces of second sort of music data different in format from

said first sort of music data (see Abstract), comprising: an interface connected to a data source of said pieces of said first sort of music data, another data source of said pieces of said second sort of music data and a destination to which a music data file is supplied (sections 0048, 0032, 0033 and 0039); and a data processing unit connected to said interface, extracting pieces of reference characteristic data representative of particular features of an audio waveform expressing said music passage from said pieces of said second sort of music data, and forming said pieces of said first sort of music data, said pieces of reference characteristic data and pieces of time data representative of timing to reproduce tones produced in said performance into said music data file for supplying said music data file through said interface to said destination (sections 0030, 0031 and 0049).

Regarding claim 4, Neuman further teaches: the format for said piece of said first sort of music data is defined in MIDI, and the format for said pieces of said second sort of music data is defined in Red Book for compact discs (section 0048).

Regarding claim 11, Neuman further teaches: said data processing unit extracts abrupt changes of an attribute of sound from said pieces of said second sort of music data as said pieces of said reference characteristic data, and said abrupt changes are stored in said music data file together with other pieces of said time data representative of timing at which said abrupt changes take place (sections 0030 and 0031).

Regarding claim 12, Neuman further teaches: said abrupt changes are extracted from the entire music passage so that another music passage is made consistent with said music passage by making said abrupt changes correspond to abrupt changes

extracted from pieces of said second sort of music data representative of said another music passage (section 0031).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neuman (U.S. Pub. No. 20030103076) in view of Hagiwara et al. (U.S. Pat. No. 6750389).

Neuman teaches the recorder that includes the subject matter discussed above except that an automatic player piano serves as said data source so that said pieces of said first sort of music data are supplied to said interface while a user is fingering on said automatic player piano, and a compact disc loaded into a compact disc driver serves as said another data source so that said piece of said second sort of data are transferred from said compact disc to said interface while said user is fingering on said automatic player piano.

Hagiwara et al. disclose a musical performance control and tone generation apparatus, and teach: an automatic player piano (Fig. 2) serves as said data source (col. 5, lines 41-67) so that pieces of first sort of music data (201-203) are supplied while a user is fingering on said automatic player piano (col. 7, lines 8-20), and a

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compact disc (401) loaded into a compact disc driver serves as another data source (301-303) so that said piece of said second sort of data are transferred from said compact disc to said interface while said user is fingering on said automatic player piano (cols. 5-6, lines 41-16 and col. 7, lines 8-20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Hagiwara et al. in the invention of Neuman et al. in order to dynamically reproduce synchronized piano tones for an ensemble between an automatic player piano and a playback of a music passage (Hagiwara et al., col. 2, lines 43-52).

#### ***Allowable Subject Matter***

6. Claims 2, 3, 5-10, 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 16-33 are allowed.

#### ***Reasons for Allowance***

8. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claims 2, 3 and 5-7 is the inclusion of the limitation that said data processor extracts pieces of reference correlation data representative of variation of certain frequency components from said pieces of second

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sort of music data as said pieces of said reference characteristic data, and said pieces of reference correlation data are used in a correlation analysis between said music passage and another music passage. It is this limitation found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 8-10 is the inclusion of the limitation that said certain piece of said reference correlation data at said head portion and said another certain piece of said reference correlation data at said end portion occupy a head of the series of the pieces of said second sort of music data and an end of said series of said pieces of said second sort of music data so that the length of said music passage is determined on the basis of said times. It is this limitation found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 13 and 14 is the inclusion of the limitation that said data processing unit extracts abrupt changes of an attribute of sound from said pieces of said second sort of music data as said pieces of said reference characteristic data, and said abrupt changes are stored in said music data file together with other pieces of said time data representative of timing at which said abrupt changes take place in the form of system exclusive event code and in the form of time data code. It is this limitation found in each of the claims, as it is claimed in the

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combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 16-30 is the inclusion of the limitation of a data processing unit connected to said interface, extracting pieces of objective characteristic data representative of particular features of another audio waveform expressing said music passage from said pieces of second sort of music data, comparing said pieces of objective characteristic data with said pieces of reference objective characteristic data so as to find time differences between said particular features of said audio waveform and said particular features of said another audio waveform, rescheduling timing to supply said pieces of said first sort of music data to said sound source by changing said pieces of time data, and supplying said pieces of said second sort of music data to said another sound source and said pieces of said first sort of music data to said sound source at the timing represented by the pieces of time data already changed. It is this limitation found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 31-33 is the inclusion of the limitation of a data processing unit connected to said interface and communicating with said data source, said another and said source of music data file for said preliminary recording and with said source of music data file, said sound source and said another sound source for said synchronous playback, in which said data processing unit extracts said pieces of reference characteristic data from said pieces of said second



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sort of music data, and forms said pieces of said first sort of music data, said pieces of reference characteristic data and said pieces of time data into said music data file for supplying said music data file through said interface to said source of music data file, and in which said data processing unit extracts pieces of objective characteristic data representative of particular features of another audio waveform expressing said music passage from said other pieces of second sort of music data, compares said pieces of objective characteristic data with said pieces of reference objective characteristic data so as to find time differences between said particular features of said audio waveform and said particular features of said another audio wavtform, reschedules timing to supply said pieces of said first sort of music data to said first sound source by changing said pieces of time data, and supplies said other pieces of said second sort of music data to said another sound source and said pieces of said first sort of music data to said sound source at the timing represented by the pieces of time data already changed. It is this limitation found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Prior Art Citations***

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9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Furukawa (U. S. Pub. No. 20030101862) is entitled "Music recorder and music player for ensemble on the basis of different sorts of music data".

2) Hagiwara et al. (U. S. Pub. No. 20020178898) is entitled "Musical performance control method, musical performance control apparatus and musical tone generating apparatus".

3) Uehara et al. (U. S. Pub. No. 20030133700) is entitled "Multimedia platform for recording and/or reproducing music synchronously with visual images".

#### ***Contact Information***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianchun Qin whose telephone number is (571) 272-5981. The examiner can normally be reached on 8:00am - 5:30pm.

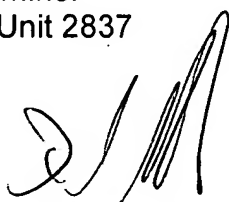
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JQ   
November 3, 2005

Jianchun Qin  
Examiner  
Art Unit 2837

  
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